REMARKS

Reconsideration and withdrawal of the rejection set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claim 4 has been previously canceled without prejudice or disclaimer of subject matter. Claims 1-3, 5 and 6 remain pending in the application, with Claims 1 and 5 being independent. Claims 1 -3 and 5 have been amended herein.

Claims 1-3, 5 and 6 have been rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,736,995 (Bohorquez, et al.). With regard to the claims as currently amended, this rejection is respectfully traversed.

Independent Claim 1 as currently amended is directed to inkjet recording apparatus that performs recording by ejecting ink onto a recording medium using plural element substrates. In the apparatus, the element substrates each have plural heating units to eject the ink. Plural element substrates are arranged on a common support member. The common support member conducts heat among the element substrates. A recording mode setting unit sets an element substrate that is to be used for recording and an element substrate that is not to be used for recording from among the plural element substrates. A control unit heats the element substrate that is set by the recording mode setting unit to not be used for recording to adjust the temperature of the element substrates to be used for recording utilizing heat conduction.

In Applicants' view, Bohorquez, et al. discloses controlling print quality in an inkjet printer by delivering synchronized heating, non-printing pulses and printing

pulses to the ink firing resistors during print firing operations such as during the printing of a swath. A temperature of the printhead substrate is measured and compared against a reference temperature during printing operations. If the measured temperature is below the reference temperature, the printhead substrate is heated during the printing operations to bring the substrate up to the reference temperature. The heating is done by delivering synchronized heating non-printing pulses and printing pulses to the ink firing resistors during selected print firing periods. Either the heating pulses or the printing pulses, but not both, occur during a selected print firing period. The heating pulses are logically OR-ed with the printing pulses to achieve the synchronization.

According to the invention of Claim 1 as currently amended, plural recording element substrates are arranged on a common support member which support member conducts heat among the element substrates. a control heats element substrates that are not set for use to record in a recording mode to adjust the temperature of the element substrates that are used for recording utilizing heat conduction through the support member. Advantageously, the speed of recording is improved and recording is not interrupted since temperature adjustment is carried out using only element substrates not used for recording.

Bohorquez, et al. may disclose a structure in which plural recording heads are provided. Fig. 3 of Bohorquez, et al. shows an arrangement of nozzles 42 on a printhead substrate 40 but is devoid of any disclosure of a common support member on which more than one printhead substrate is arranged. Accordingly, it is not seen that Bohorquez, et al. teaches or suggests any arrangement in which heat from one element

substrate that is not used in a recording mode is transmitted through a common supporting member to another element substrate that is used in the recording mode.

Further, Bohorquez, et al. shows in Fig. 4 short heating pulses sent to a firing chamber resistor 38 between longer printing pulses sent to the same firing chamber resistor in a recording mode whereby the heating pulses are "ored" with printing pulses sent to the same firing chamber resistor used in one recording mode. As a result, Bohorquez, et al.'s providing both heating pulses and printing pulses to the firing chamber resistors is directed away from and fails in any manner to teach or suggest the feature of Claim 1 of heating an element substrate set to be not used for recording in a recording mode to adjust the temperature of element substrates set to be used in the recording mode through a common support member for the element substrates. It is therefore believed that Claim 1 as currently amended is completely distinguished from Bohorquez, et al. and is allowable.

Independent Claim 5 as currently amended is directed to inkjet recording apparatus that performs recording by ejecting ink onto a recording medium using plural element substrates. In the apparatus, the element substrates each have plural heating units to eject the ink. Plural element substrates are arranged on a common support member which conducts heat among the element substrates. A discrimination unit discriminates between an element substrate that is to be used and an element substrate that is not to be used for the next recording to be performed. A control unit heats the element substrate discriminated by the discriminating unit to be not used before the element substrate discriminated to be

used for recording starts a recording operation to adjust the temperature of the element substrate to be used utilizing heat conduction.

It is a feature of Claim 5 that plural recording element substrates are arranged on a common support member which conducts heat among the element substrates. An element substrate discriminated as not to be used in a next recording is heated before the element substrate discriminated to be used for recording starts a recording operation to adjust the temperature of the element substrate to be used utilizing heat conduction through the common support member. As discussed with respect to Claim 1, Bohorquez, et al. only teaches recording nozzles 42 on a printhead substrate 40 but does not suggest any arrangement of printhead substrates on a common support member, any arrangement whereby heat is conducted among printhead substrates or any arrangement in which there is heating of discriminated element substrates before a recording operation as in Claim 5.

Further, Bohorquez, et al. is devoid of any disclosure of discriminating between element substrates to be used and not to be used in a next recording. Rather than heating element substrates discriminated as not be used in a next recording to adjust temperature in the next recording operation, Bohorquez, et al. only provides that during printing heating pulses are inserted between printing pulses sent to chamber firing resistors that are used in a current recording. There is no discrimination or heating of an element substrate discriminated as not be used before start of a recording operation. Accordingly, it is not seen that Bohorquez, et al.'s temperature adjustment by heating pulses "ored" with printing pulses sent to chamber firing resistors on a printhead substrate in any manner

teaches or suggests the features of Claim 5. It is therefore believed that Claim 5 as currently amended is completely distinguished from Bohorquez et al. and is allowable.

Accordingly, independent Claims 1 and 5 are patentable over the citation of record. Reconsideration and withdrawal of the § 102 rejection are respectfully requested.

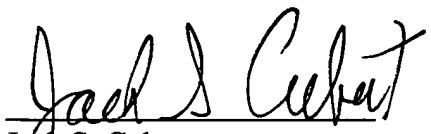
For the foregoing reasons, Applicants respectfully submit that the present invention is patentably defined by independent Claims 1 and 5. Dependent Claims 2, 3 and 6 are also allowable, in their own right, for defining features of the present invention in addition to those recited in their respective independent claims. Individual consideration of the dependent claims is requested.

This Amendment After Final Rejection is an earnest attempt to advance prosecution and reduce the number of issues, and is believed to clearly place this application in condition for allowance. This Amendment was not earlier presented because Applicants earnestly believed that the prior Amendment placed the subject application in condition for allowance. Accordingly, entry of this Amendment under 37 CFR 1.116 is respectfully requested.

Applicants submit that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicants' attorney, Justin J. Oliver, may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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